

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
20 January 2005 (20.01.2005)

PCT

(10) International Publication Number  
**WO 2005/006734 A1**

(51) International Patent Classification<sup>7</sup>: **H04N 1/195,**  
H01J 43/24, G02B 6/00

(21) International Application Number:  
PCT/GB2004/002087

(22) International Filing Date: 13 May 2004 (13.05.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
0316081.9 9 July 2003 (09.07.2003) GB  
0316082.7 9 July 2003 (09.07.2003) GB

(71) Applicant (for all designated States except US): **COUNCIL FOR THE CENTRAL LABORATORY OF THE RESEARCH COUNCILS** [GB/GB]; Klik Knowledge Transfer, Daresbury Laboratory, Daresbury, Warrington, Cheshire WA4 4AD (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **TULLOCH, Andrew** [GB/GB]; 20 Chamberlain Gardens, Arbor Field

Cross, Reading, Berkshire RG2 9QA (GB). **PRATT, Norman, Leslie** [GB/GB]; Mulberries, The Hall Barns, Furnex Pelham, Buntingford, Hertfordshire SG9 0TR (GB).

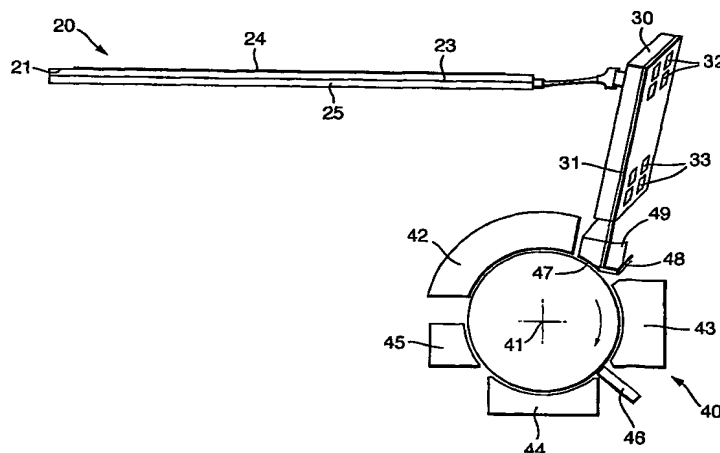
(74) Agents: **PERKINS, Sarah** et al.; Stevens Hewlett & Perkins, Halton House, 20/23 Holborn, London, Greater London EC1N 2JD (GB).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,

[Continued on next page]

(54) Title: **IMAGE MACHINE USING A LARGE AREA ELECTRON MULTIPLIER**



(57) Abstract: The imaging machine which may form part of a photocopier, scanner or the like has a light source, a platen (21) consisting of an upper, light transparent plate (23) and beneath the upper plate an image collector unit (25) and an image data processor (30). The image collector unit (25) consists of a photosensitive sheet arranged above an array of electron multiplier channels. Light reflected from an object laid on the surface (24) of the upper plate (23) is converted by the photosensitive sheet into electrons that are multiplied by the electron multiplier channels to amplify the image of the object resting on the upper plate. The surface area of the electron multiplier array corresponds to the imaging area of the imaging machine making it possible for a complete image to be captured simultaneously across the entire imaging area rather than by means of scanning optics. Moreover, the use of the electron multiplier array enables lower powered light sources to be employed.

WO 2005/006734 A1



SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

**Published:**

— with international search report

**Declaration under Rule 4.17:**

— of inventorship (Rule 4.17(iv)) for US only

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*